



TEasy Automated Pipetting System

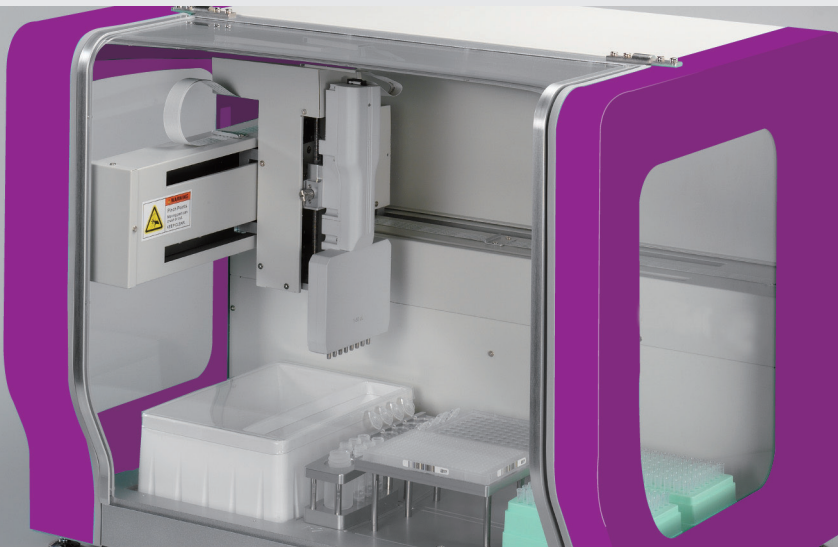
—Your reliable liquid handling partner

TEasy AP400/600

Your Reliable Liquid Handling Partner

There are many challenges for laboratory technicians in preparing PCR and qPCR reactions. For example, for small volume reagents, the accuracy and repeatability of pipette can not be guaranteed. The manual operation is very cumbersome and time-consuming. Moreover, the probability of manual pipette error is very high. The small-scale TEasy Automated Pipetting System is a full-automatic, high-precision liquid transfer system, which is specially used for small-scale PCR/qPCR preparation. The accuracy, precision and repeatability of the experiment are guaranteed. And it can minimize the waste of reagents caused by manual operation errors.

Different from the complex and multi-purpose pipetting system, TEasy is specially designed for the complex and high accuracy liquid transfer. Its intuitive and simple installation and programming can save a lot of time and cost for the experimenter. TEasy will help you achieve more efficient work.



Easy to use

- The software operation can be easily mastered within 1 h without any former experience
- The built-in PCR/qPCR preparation program can be modified and transmitted quickly
- Easy to change between 1 channel and 8 channels, 50 μ l or 200 μ l and four kinds of APM without the use of tools
- Equipped with 4 adapter positions of interchangeable standard microplates and tip racks and 2 adapter positions of interchangeable reagent tanks
- The pipetting action command can be imported through CSV / TXT format files
- Main applications: Liquid dispensation/transfer of 96/384-well plate, gene sequencing, HLA typing, SNP detection, etc

Cost-effective

- The most cost-effective automated pipetting system in the market
- Interchangeable pipette tip with Beckman Biomek 3000 system

- The passive cooling module can keep the temperature of reagents below 7°C for more than 60 min
- It is especially suitable for sample loading of 384-well plate, reducing human error and greatly saving reagent cost

Simple maintenance

- The automated pipetting module (APM) can be easily replaced and sent back for calibration
- The software can be upgraded through connecting to the Internet
- Small in size, light in weight and easy to maintain

High accuracy and precision

- Each APM is calibrated in accordance with ISO-8655
- The results of qPCR standard curve have good repeatability (Figure 1)
- It has higher precision than manual pipette (Figure 2)

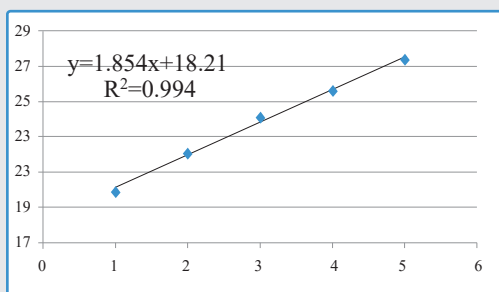


Figure 1: qPCR standard curve results show good repeatability
cDNA samples of 7 μ l NIH 3T3 cells are diluted 4 times with 21 μ l of water at a ratio of 1: 4. Roche LightCycler 480 real-time fluorescence quantitative PCR instrument and SuperReal PreMix Plus(SYBR Green) were used for the detection.

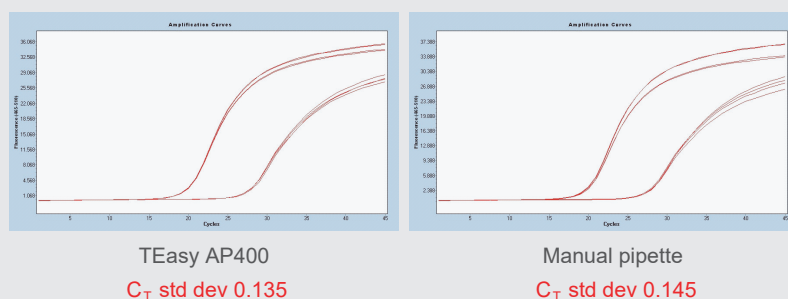


Figure 2: Higher precision compared to manual pipetting

4 repeats of human GAPDH amplification (top curve). Add 2 μ l cDNA to 18 μ l MasterMix to form 20 μ l reaction system. Roche LightCycler 480 real-time fluorescence quantitative PCR instrument and SuperReal PreMix Plus (SYBR Green) were used for the detection.

1 Protective cover

- The safety door can stop automatically in case of emergency
- Light organic glass material

2 Automatic transfer module (APM)

- Easy to replace
- 1/8 channel, 50 μ l/200 μ l modules
- Automatic channel and volume confirmation

3 Disposable waste liquid tank

- Capacity >400 pipette tips

4 2×reagent position

- Positions for 1.5 ml or 2 ml centrifuge tube, 8 ml reagent bottle, 15 ml or 80 ml reagent tank and 8-tube PCR strip
- Positions for CoolBlock (fitted with 1.5 ml and 2 ml centrifuge tubes) and 8 ml reagent bottles

5 4/6-position SBS workbench

- 1 designated tip rack
- 2 standard SBS board positions
- 1 (or 3/600 series) common position (plate position and tip rack)
- CoolBlock fitted with 96/384-well PCR plate
- 20-well centrifuge tube adapter (1.5 ml or 2 ml centrifuge tube)

6 Compact design

- Less space is needed
- Light in weight

7 15.6 inch computer with software installed

- Suitable for softwares designed for micro liquid preparation such as PCR/qPCR
- Pre operation simulation function
- Operating system: Windows XP/7/8 (32/64 bit)



Function of Automated Pipetting Module (APM)

	1/8 channel (50 μ l)	
	1 μ l	50 μ l
Accuracy (Rel.)	$\pm 7\%$	$\pm 1\%$
Precision (Rel. CV)	$\leq 7.5\%$	$\leq 0.4\%$

	1/8 channel (200 μ l)	
	10 μ l	200 μ l
Accuracy (Rel.)	$\pm 3\%$	$\pm 0.8\%$
Precision (Rel. CV)	$\leq 1\%$	$\leq 0.15\%$

Note: According to the ISO-8655 standard, APM should be calibrated under controllable temperature (21-25 $^{\circ}$ C, ± 0.5 $^{\circ}$ C) and humidity (60-90%).

Introduction of TEasy AP 400/600s

Aseptic and Temperature Control Applications

The new TEasy AP 400/600s and TEasy AP 400/600 use the same working platform and have added more advanced functions, including optional ultraviolet lamp, HEPA (high efficiency particulate air filter) and optional ACHM (Activated Cooling/Heating Model).

For sterile clinical laboratories and RNA experiments, UV lamp and HEPA filtration will provide a clean environment. For temperature sensitive samples and reagents, ACHM will effectively prevent degradation



High Safety (HEPA & UV)

TEasy AP 400/600s offers users a better security protection. During the operation, the standard UV and HEPA modules ensure the efficient table cleanliness and provide a positive air pressure environment. Meanwhile, the UV safety cover can protect eyes from UV light.

Heating or cooling, at your discretion (ACHM)

Through the optional ACHM, the instrument can keep precious samples and reagents at low temperature throughout the experiment. On the other hand, the reaction can be accelerated by heating. Different models of ACHM are suitable for different consumables.

The ACHM includes an active cooling and heating control box. Control box includes interface, power supply and active cooling/heating adapter.

Operating Parameters

UV lamp	
Irradiation time	15 min
Irradiation intensity	> 40 $\mu\text{W}/\text{cm}^2$
Wavelength	254 nm (UV-C)
HEPA	
Filter	3M [®] HEPA Filterx 2
Volume flow rate	> 200 L/min
ACHM	
Temp. control range	4 ~ 70°C
Maximal heating speed	5°C/min at RT=25°C
Maximal cooling speed	2°C/min at RT=25°C
Position	R1 / A / C Areas

TGapp—Personalized Application Software

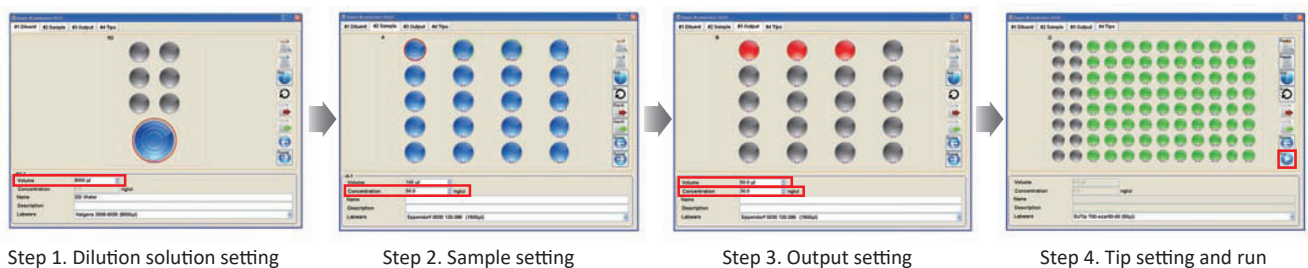
Easy to set up and operate

In order to simplify the design of TEasy programming, we created TGapp. TGapp focuses on the specific application of users, simplifies the operation steps, and ensures the easy operation. If you want to know what TGapp is, come and experience now!

DNA/RNA concentration homogenization of TGapp

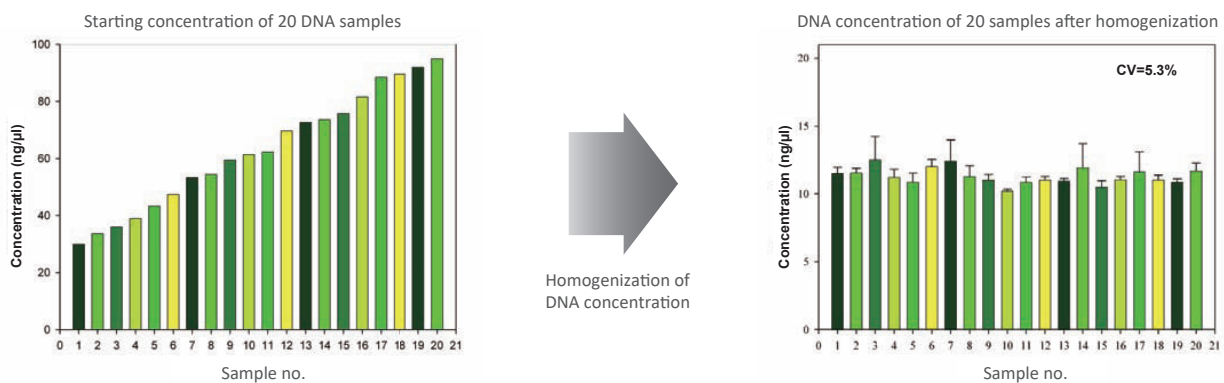
The homogenization of sample concentration is a vexing problem before reverse transcription. We wish that all samples have the same input to reduce the internal error. TGapp DNA/RNA concentration homogenization can solve this problem. No more complicated calculation is needed to reduce the error of pipetting. All you need to provide is the initial concentration of the sample.

Steps of sample concentration homogenization



Homogenization of DNA Concentration

Homogenization data of DNA samples from 20 types of Arabidopsis



For more TGapps, please inquire

We will provide the customized TGapp for specific needs



Product Specifications



Cat. No.	AP400	AP600	AP400s	AP600s
Workstation load				
SBS standard position	2 ~ 3	2 ~ 5	2 ~ 3	2 ~ 5
Tip rack position	1 ~ 2	1 ~ 4	1 ~ 2	1 ~ 4
Reagent zone	2	2	2	2
Function				
Liquid Transfer (LT)	Y	Y	Y	Y
Multiple Dispensing (MD)	Y	Y	Y	Y
Step Dilution (SD)	Y	Y	Y	Y
Pause (Pause)	Y	Y	Y	Y
Mix (MIX)	Y	Y	Y	Y
Loop (Loop)	Y	Y	Y	Y
UV lamp/ High efficiency air filter UV/HEPA	N/A	N/A	Y	Y
Active cooling and heating module	N/A	N/A	Optional; Up to 3 plate modules	Optional; Up to 3 plate modules
Automated pipetting module (APM)	Replaceable 1/8 channel, maximum volume 50 µl/200 µl			
Power interface	RS-232, USB 3.0 / 2.0			
Power adapter	100~240V, 50/60 Hz, 100W			
Dimension (W×D×H)	590 × 450 × 470 mm	740 × 450 × 470 mm	660 × 450 × 490 mm	810 × 450 × 490 mm
Weight (N.W.)	25 kg	29 kg	31 kg	35 kg
Dimension of ACHM control box (W×D×H)	N/A	N/A	240 × 300 × 230 mm	240 × 300 × 230 mm
Weight of ACHM control box (N.W.)	N/A	N/A	2 kg	2 kg

Supporting Blocks

